

WHAT IS CLAIMED IS:

1. A non-contact type profile measuring apparatus comprising:

a converting section for converting a light  
5 transmitted from a light source into a light including  
a component parallel with an optical axis;

a light receiving lens for receiving a light  
including a shadow of a measurement object which is  
provided to intercept a part of the light;

10 a first diaphragm provided in a first rear side  
focal position of the light receiving lens;

a one-dimensional image sensor for receiving a light  
passing through the first diaphragm;

a signal processing section for obtaining a  
15 dimension of the shadow of the measurement object as an  
outside dimension of the measurement object by processing  
an electric signal obtained from the one-dimensional image  
sensor;

a display section for displaying the outside  
20 dimension thus obtained;

a beam splitter provided on an optical path between  
the light receiving lens and the one-dimensional image  
sensor; and

a two-dimensional image sensor for receiving a light  
25 split by the beam splitter,

wherein the signal processing section processes an electric signal obtained from the two-dimensional image sensor, and the display section displays a monitor image including a measured portion of the measurement object.

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2. The non-contact type profile measuring apparatus according to claim 1, wherein the beam splitter is provided between the first diaphragm and the one-dimensional image sensor.

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3. The non-contact type profile measuring apparatus according to claim 1, further comprising:

a second diaphragm in a second rear side focal position of the light receiving lens formed between the beam splitter and the two-dimensional image sensor,

15 wherein the beam splitter is provided between the light receiving lens and the first diaphragm.

4. The non-contact type profile measuring apparatus according to claim 1, wherein the signal processing section obtains a measuring line corresponding to the measured portion of the measurement object from which the one-dimensional image sensor receives the light, and the display section displays the measuring line so  
20 that it is superposed on the monitor image of the  
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measurement object.

5. The non-contact type profile measuring apparatus according to claim 1, wherein the signal processing section obtains a mark indicative of an edge position of the shadow of the measurement object by processing the electric signal obtained from the one-dimensional image sensor, and the display section displays the mark so that it is superposed on the monitor image of the measurement object.

6. The non-contact type profile measuring apparatus according to claim 1, wherein the display section displays a tolerance of the outside dimension of the measurement object.